

IMPROVING A FIELD OXIDE PROFILE OF AN
ISOLATION REGION ASSOCIATED WITH A CONTACT STRUCTURE
OF A SEMICONDUCTOR DEVICE

ABSTRACT OF THE DISCLOSURE

In one embodiment of the present invention, a contact structure of a semiconductor device within an integrated circuit includes an active region, the active region having been defined using a mask provided on a substrate. The contact
5 structure further includes an isolation region adjacent the active region and including a field oxide: the field oxide having been grown by exposure of the substrate to a thermal process and an oxygen-containing gas; a film having been formed on a top surface of the mask during exposure to the thermal process and oxygen-containing
10 gas; a dry etching process having been performed to substantially remove the film from the top surface of the mask and to remove a top portion of the field oxide in the isolation region; and a wet etching process having been performed to substantially remove any portion of the mask remaining after the dry etching process.